

VREUGDEWATER ET AL. -- 10/797,568
Attorney Docket No.: 081468-0308406

- Supplemental Amendment Under §1.116 -

REMARKS

Reconsideration and the timely allowance of the pending claims, in view of the following remarks, are respectfully requested.

Applicants thank the Examiner for the courtesies extended during the telephone conference of February 14, 2006 in which the Examiner agreed to consider this Supplemental Amendment After Final Rejection.

In the Final Office Action dated October 19, 2005, the Examiner rejected claims 1-19, under 35 U.S.C. §112, ¶2, as allegedly being indefinite; rejected claims 1, 2, 5, 7-12, 15, and 17-19, under 35 U.S.C. §102(a), as being allegedly being unpatentable over Kubo '769 (U.S. Patent Pub. No. 2003/0141769); rejected claims 3, 4, 13, and 14, under 35 USC §103(a), as allegedly being unpatentable over Kubo '769 in view of Tamai '170 (U.S. Patent Pub. No. 2004/0032170); and rejected claims 6 and 16, under 35 USC §103(a), as allegedly being unpatentable over Kubo '769 in view of Aoyama '381 (U.S. Patent No. 5,808,381).

By this Supplemental Amendment, Applicants have amended independent claims 1, 10, and 11 and dependent claims 7, 9, 17, and 19, to provide a clearer presentation of the claimed subject matter. The amendments overcome the alleged indefiniteness asserted by the Examiner. Applicants submit that no new matter has been introduced. Accordingly, Applicants request the immediate withdrawal of the rejections to claims 1-19, under 35 U.S.C. §112, ¶2.

Applicants respectfully traverse the prior art rejections, under 35 U.S.C. §102(a), §103(a), for the following reasons:

II. Prior Art Rejections Under 35 U.S.C. §102(a), §103(a).

The Examiner indicated that the prior art rejections were sustained given the indefiniteness rejection of claims 1-19. (See, Office Action, page 4). The indefiniteness rejection was premised on the assertion that it was unclear on how the separation layers

VREUGDEWATER ET AL. -- 10/797,568

Attorney Docket No.: 081468-0308406

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and the cooling element could be in substantial thermal contact with the separation layers and still be independent. (See, Office Action, page 2). Applicants submit that the claim phrase was intended to identify that the cooling element and the separation layers are distinct from each other and do not comprise the same component.

To this end, amended claim 1 now positively recites that the plurality of coils are separated from each other by one or more separation layers of high thermal conductivity material arranged to be in substantial thermal contact with at least one cooling element that accommodates a coolant fluid and is distinct from said one or more separation layers. In other words, the coolant element circulates coolant fluid and is distinct from the separation layers that separate the coils. These features are amply supported by the embodiments described in the Specification. (See, e.g., Specification: par. [0055]-[0056], FIGs. 3-5).

With this said, in contrast to the Examiner's contentions, there is nothing in the references of record, including the Kubo '769 reference, that teaches the combination of features recited in claim 1. In particular, the Kubo '769 reference discloses the use of a coil unit 160 that is divided into the upper partial coil 161 and the lower partial coil 162 and a first cooling pipe (coolant channel) 153 that is interposed between the upper and lower coils 161 and 162. The material of the first cooling pipe 153 is preferably a high-thermal-conductivity material such as copper or stainless steel in order to increase the heat transfer efficiency from the outside to the inside. A coolant 154 is preferably an inert substance with a large specific heat and low viscosity. (See, e.g., Kubo '769: par. [0066]; FIG. 1).

According to the Examiner, the coolant 154 of Kubo '769 corresponds to the claimed coolant element and the cooling pipe 153 corresponds to the claimed separation layers. (See, Office Action, page 3). However, as indicated above, claim 1 recites that the coolant fluid is circulated by the cooling element and that the cooling element is distinct from the separation layers. Thus, even though Kubo '769 may teach the use of coolant within the coolant element, it does not, in any way, teach the use of separation layers that are distinct from the cooling element, as required by claim 1.

VREFUGDEWATER ET AL. -- 10/797,568

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- Supplemental Amendment Under §1.116 -

For at least this reason, Applicants submit that the Kubo '769 reference does not teach each and every element of the claimed combination of elements recited by amended claim 1. Accordingly, the Kubo '769 reference cannot anticipate claim 1 and Applicants respectfully request the withdrawal of the rejection of claim 1, under 35 U.S.C. §102(a). Applicants also request the withdrawal of the §102(a) rejections with respect to claims 2, 5, and 7-11, which depend from claim 1.

Moreover, because independent claims 10 and 11 recite similar features to claim 1 that have already been shown to overcome the §102(a) rejections, Applicants request the withdrawal of these rejections for claims 10 and 11 as well as for claims 12, 15, and 17-19, which depend from claim 11.

Further, as best understood, none of the references of record are capable of curing the deficiencies noted above regarding claim 1. That is, neither Tamai '170 nor Aoyama '381 teach that the plurality of coils are separated from each other by one or more separation layers of high thermal conductivity material arranged to be in substantial thermal contact with at least one cooling element that circulates coolant fluid and is distinct from said one or more separation layers, as required by claim 1. Thus, claim 1 is patentable over each of the references of record and claims 2-9 are also patentable by virtue of dependency as well as for their additional recitations. Also, because independent claims 10 and 11 recite similar features to claim 1 that have already been shown to be patentable, Applicants submit that claims 10 and 11 are also patentable and that claims 12-19, which depend from claim 11 are also patentable. To this end, Applicants request the immediate withdrawal of the rejections to claims 3, 4, 6, 13, 14, and 16, under 35 U.S.C. §103(a).

II. Conclusion.

All matters having been addressed and in view of the foregoing, Applicants respectfully request the entry of this Amendment, the Examiner's reconsideration of this application, and the immediate allowance of all pending claims.

Applicants submit that the entry of this Amendment is proper under 37 C.F.R. §1.116 as the claim changes: (a) place the application in condition for allowance for

VREUGDEWATER ET AL. -- 10/797,568Attorney Docket No.: 081468-0308406- Supplemental Amendment Under §1.116 -

the reasons discussed herein; (b) do not require any further consideration as the changes incorporate, in one form or another, features already claimed and presumably searched; and (c) places the application in better form for an Appeal, should an Appeal be necessary.

Applicant's Counsel remains ready to assist the Examiner in any way to facilitate and expedite the prosecution of this matter. Please charge any fees associated with the submission of this paper to Deposit Account Number 033975; Order No. 081468/0308406. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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